- —, 1972 (1973). Mating of Butterflies. J. Res. Lepid. 11 (2): 99-127.
- —, 1974. Mate-locating behaviour of butterflies. *Amer. Midl. Nat.* 91: 103-117. Shields, O., 1967. Hilltopping. *J. Res. Lepid.* 6 (2): 69-178.

Shields, O. & Emmel, J., 1973. Carrying-pair behaviour of butterflies. J. Res. Lepid. 12: 25-64.

Stride, G.O., 1958. Further studies on the courtship behaviour of African mimetic butterflies. *Anim. Behav.* 6: 224-230.

## Protracted emergence of *Eupithecia pusillata* D. & S. (Lep. Geometridae), Juniper Pug.

On the 10th May 1989 while walking the ridge of Whitbarrow Scar, Westmorland, I came across an isolated clump of Juniper bushes which was, for the lack of a better word, infested with larvae of *E. pusillata*; as many as 40 - 50 larvae falling onto the tray at a single beat. Suspecting the possibility of a high rate of parasitism in such a dense population I selected between 50 - 60 last instar larvae.

The first of these began to spin up a few days later and by the 17th May all had pupated. Between 30th May and 10th June 23 moths emerged at the approximate rate of two each day. On 3rd July I went away for a few days and as over three weeks had elapsed since the last emergence I presumed that the pupae were going to "lay over" until the following year; a not uncommon habit in some northern species, especially those occurring at high altitudes. I was therefore surprised and somewhat annoyed to find twelve mostly rubbed specimens on my return on the 6th. For the next week there were no further emergences despite the very hot weather, but not wishing to be caught out a second time I decided to take the remaining pupae with me to Ireland on 13th July. This proved to be a correct move as four came out on the 17th followed by one more on the 18th.

These were the last to emerge and in October seven pupae were put outside in a garden shed having first discarded four dead ones. An examination at the time of writing (February 1990) revealed another fatality with the remainder appearing still healthy. As yet there has been no sign of parasitism.

In summary it would be unscientific to infer that the above interesting sequence of events obtained in captivity bears any similarity to feral behaviour, however experience shows that rearing in captivity, if it is going to have any effect, usually accelerates development and not retards it. So perhaps it is not too unreasonable to presume this species has an extended period of emergence in the wild and also should the same irregular pattern experienced in captivity occur in nature at a site being monitored by a light trap who could argue with a recorder who suggested that the freshly emerged specimens appearing in the latter half of July were probably the offspring of those noted in late May and early June? So endeth a cautionary tale.— BERNARD SKINNER, 5 Rawlins Close, South Croydon, Surrey CR2 8JS.